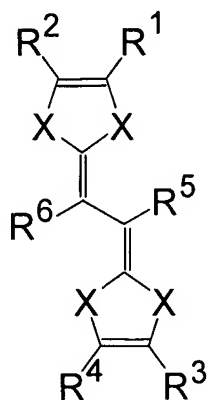


AMENDMENTS TO THE CLAIMS:

Please amend the claims as follows:

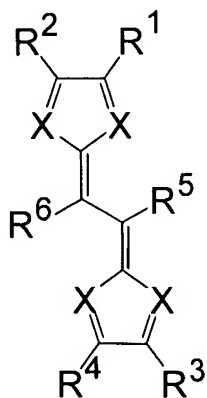
1-18. (Cancelled)

19. (New) An electrode active material for an electrochemical device, comprising a compound having a structure represented by the general formula (1a):



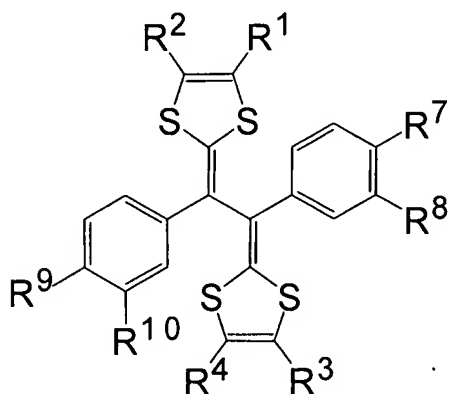
where X is a sulfur atom or an oxygen atom; each of R¹ to R⁴ is independently a linear or cyclic aliphatic group, a hydrogen atom, a hydroxyl group, a cyano group, an amino group, a nitro group or a nitroso group; each of R⁵ and R⁶ is independently a linear or cyclic aliphatic group, or a hydrogen atom; said aliphatic group includes at least one selected from the group consisting of an oxygen atom, a nitrogen atom, a sulfur atom, a silicon atom, a phosphorus atom, a boron atom, and a halogen atom.

20. (New) An electrode active material for an electrochemical device, comprising a compound having a structure represented by the general formula (1b):



where X is a nitrogen atom; each of R¹ to R⁴ is independently a linear or cyclic aliphatic group, a hydrogen atom, a hydroxyl group, a cyano group, an amino group, a nitro group or a nitroso group; each of R⁵ and R⁶ is independently a linear or cyclic aliphatic group, or a hydrogen atom; said aliphatic group includes at least one selected from the group consisting of an oxygen atom, a nitrogen atom, a sulfur atom, a silicon atom, a phosphorus atom, a boron atom, and a halogen atom.

21. (New) An electrode active material for an electrochemical device, comprising a compound having a structure represented by the general formula (2):



where each of R¹ to R⁴ and R⁷ to R¹⁰ is independently a linear or cyclic aliphatic group, a hydrogen atom, a hydroxyl group, a cyano group, an amino group, a nitro group or a nitroso group; said aliphatic group includes at least one selected from the group consisting of an oxygen atom, a nitrogen atom, a sulfur atom, a silicon atom, a phosphorus atom, a boron atom and a halogen atom.

22. (New) The electrode active material in accordance with claim 19, wherein said compound is a polymer compound having more than one structure represented by the general formula (1a).

23. (New) The electrode active material in accordance with claim 20, wherein said compound is a polymer compound having more than one structure represented by the general formula (1b).

24. (New) The electrode active material in accordance with claim 21, wherein said compound is a polymer compound having more than one structure represented by the general formula (2).

25. (New) The electrochemical device in accordance with claim 22, wherein said polymer compound has a polyacetylene chain or a polymethacrylate chain as a main chain.

26. (New) The electrochemical device in accordance with claim 23, wherein said polymer compound has a polyacetylene chain or a polymethacrylate chain as a main chain.

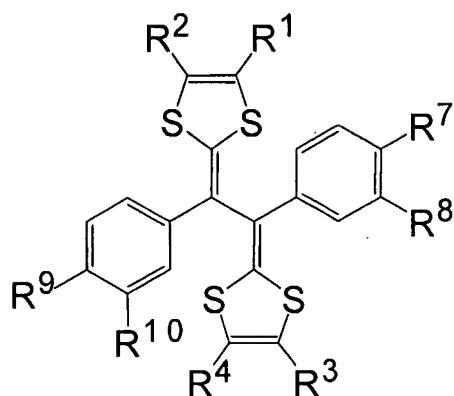
27. (New) The electrochemical device in accordance with claim 24, wherein said polymer compound has a polyacetylene chain or a polymethacrylate chain as a main chain.

28. (New) The electrochemical device in accordance with claim 19, wherein the number of carbon atoms in the aliphatic group is in the range of 1 to 6.

29. (New) The electrochemical device in accordance with claim 20, wherein the number of carbon atoms in the aliphatic group is in the range of 1 to 6.

30. (New) The electrochemical device in accordance with claim 21, wherein the number of carbon atoms in the aliphatic group is in the range of 1 to 6.

31. (New) An electrode active material for an electrochemical device, comprising a compound having a structure represented by the general formula (2):



where each of R^1 to R^4 is hydrogen atom; one of R^7 and R^8 is a hydrogen atom and the other is a methyl group; and one of R^9 and R^{10} is a hydrogen atom and the other is a methyl group.

32. (New) An electrochemical device, comprising a positive electrode, a negative electrode and an electrolyte,

wherein at least one of said positive electrode and said negative electrode includes an electrode active material in accordance with claim 19.

33. (New) An electrochemical device, comprising a positive electrode, a negative electrode and an electrolyte,

wherein at least one of said positive electrode and said negative electrode includes an electrode active material in accordance with claim 20.

34. (New) An electrochemical device, comprising a positive electrode, a negative electrode and an electrolyte,

wherein at least one of said positive electrode and said negative electrode includes an electrode active material in accordance with claim 21.

35. (New) The electrochemical device in accordance with claim 32,

wherein said electrolyte comprises a solvent, and an anion and a cation that diffuse in said solvent, and said compound is capable of forming a coordinate bond with said cation through an oxidation-reduction reaction.

36. (New) The electrochemical device in accordance with claim 33, wherein said electrolyte comprises a solvent, and an anion and a cation that diffuse in said solvent, and said compound is capable of forming a coordinate bond with said cation through an oxidation-reduction reaction.

37. (New) The electrochemical device in accordance with claim 34, wherein said electrolyte comprises a solvent, and an anion and a cation that diffuse in said solvent, and said compound is capable of forming a coordinate bond with said cation through an oxidation-reduction reaction.

38. (New) The electrochemical device in accordance with claim 35, wherein said cation is a lithium ion.

39. (New) The electrochemical device in accordance with claim 36, wherein said cation is a lithium ion.

40. (New) The electrochemical device in accordance with claim 37, wherein said cation is a lithium ion.

41. (New) The electrochemical device in accordance with claim 32, wherein said positive electrode includes said compound as a positive electrode active material, and said negative electrode includes a carbon material as a negative electrode active material.

42. (New) The electrochemical device in accordance with claim 33, wherein said positive electrode includes said compound as a positive electrode active material, and said negative electrode includes a carbon material as a negative electrode active material.

43. (New) The electrochemical device in accordance with claim 34, wherein said positive electrode includes said compound as a positive electrode active material, and said negative electrode includes a carbon material as a negative electrode active material.

44. (New) The electrochemical device in accordance with claim 32, wherein said positive electrode includes said compound as a positive electrode active material, and said negative electrode includes, as a negative electrode active material, at least one selected from the group consisting of a lithium metal, a lithium-containing composite nitride and a lithium-containing composite titanium oxide.

45. (New) The electrochemical device in accordance with claim 33, wherein said positive electrode includes said compound as a positive electrode active material, and said negative electrode includes, as a negative electrode active material, at least one selected from the group consisting of a lithium metal, a lithium-containing composite nitride and a lithium-containing composite titanium oxide.

46. (New) The electrochemical device in accordance with claim 34, wherein said positive electrode includes said compound as a positive electrode active material, and said negative electrode includes, as a negative electrode active material, at least one selected from the group consisting of a lithium metal, a lithium-containing composite nitride and a lithium-containing composite titanium oxide.

47. (New) The electrochemical device in accordance with claim 32, wherein said negative electrode includes said compound as a negative electrode active material, and said positive electrode includes a metal oxide material as a positive electrode material.

48. (New) The electrochemical device in accordance with claim 33, wherein said negative electrode includes said compound as a negative electrode active material, and said positive electrode includes a metal oxide material as a positive electrode material.

49. (New) The electrochemical device in accordance with claim 34, wherein said negative electrode includes said compound as a negative electrode active material, and said positive electrode includes a metal oxide material as a positive electrode material.

50. (New) The electrochemical device in accordance with claim 32, wherein, when said compound is used as an electrode active material, a conductive material is mixed into the electrode active material.

51. (New) The electrochemical device in accordance with claim 33, wherein, when said compound is used as an electrode active material, a conductive material is mixed into the electrode active material.

52. (New) The electrochemical device in accordance with claim 34, wherein, when said compound is used as an electrode active material, a conductive material is mixed into the electrode active material.

53. (New) The electrochemical device in accordance with claim 32, wherein, when said positive electrode includes said compound as a positive electrode active material, one of the following is used as the negative electrode material of said negative electrode: a carbon material, a lithium metal, a lithium-containing composite nitride, a lithium-containing composite titanium oxide, a composite material of tin and carbon, and a composite material of tin and another metal.

54. (New) The electrochemical device in accordance with claim 33, wherein, when said positive electrode includes said compound as a positive electrode active material, one of the following is used as the negative electrode material of said negative electrode: a carbon material, a lithium metal, a lithium-containing composite nitride, a lithium-containing composite titanium oxide, a composite material of tin and carbon, and a composite material of tin and another metal.

55. (New) The electrochemical device in accordance with claim 34, wherein, when said positive electrode includes said compound as a positive electrode active material, one of the following is used as the negative electrode material of said negative electrode: a carbon material, a lithium metal, a lithium-containing composite nitride, a lithium-containing composite titanium oxide, a composite material of tin and carbon, and a composite material of tin and another metal.

56. (New) The electrochemical device in accordance with claim 32, wherein said electrochemical device comprises one of a secondary battery, a primary battery, an electrolytic capacitor, a sensor and an electrochromic device.

57. (New) The electrochemical device in accordance with claim 33, wherein said electrochemical device comprises one of a secondary battery, a primary battery, an electrolytic capacitor, a sensor and an electrochromic device.

58. (New) The electrochemical device in accordance with claim 34, wherein said electrochemical device comprises one of a secondary battery, a primary battery, an electrolytic capacitor, a sensor and an electrochromic device.